

U.S. Department  
of Transportation

**United States  
Coast Guard**



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# **Asbestos Exposure Control Manual**

**COMDTINST M6260.16A**





COMDTINST M6260.16A

10 MAY 1994

COMMANDANT INSTRUCTION M6260.16A

Subj: ASBESTOS EXPOSURE CONTROL MANUAL

- Ref:
- (a) Safety and Environmental Health Manual, COMDTINST M5100.47(series)
  - (b) Asbestos, Tremolite, Anthophyllite, and Actinolite, 29 CFR 1910.1001 (NOTAL)
  - (c) Asbestos, Tremolite, Anthophyllite, and Actinolite, 29 CFR 1926.58 (NOTAL)
  - (d) Technical Guide: Practices for Respiratory Protection, COMDTINST M6260.2(series)
  - (e) Coast Guard Medical Manual, COMDTINST M6000.1(series)
  - (f) Asbestos Hazard Emergency Response Act, 40 CFR 763 (NOTAL)
  - (g) National Institute for Occupational Safety and Health, Analytical Method 7400 (NOTAL)
  - (h) Hazardous Waste Management Manual, COMDTINST M16478.1(series)
  - (i) National Emission Standards for Hazardous Air Pollutants, 40 CFR 61.156 (NOTAL)
  - (j) Standard for Active Waste Disposal Sites, 40 CFR 61.154 (NOTAL)
  - (k) Property Management Manual, COMDTINST M4500.5(series)
  - (l) Real Property Management Manual, COMDTINST M11011.9(series)

1. **PURPOSE.** This instruction implements a Coast Guard-wide Asbestos Exposure Control Program in accordance with references (a) through (l). This instruction also provides basic guidance and requirements in asbestos exposure control. Intended users are all Coast Guard units with the potential for asbestos exposure.

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2. ACTION. Area and district commanders; commanders, maintenance and logistics commands; commanding officers of Headquarters units; Commander, Coast Guard Activities Europe; and chiefs of offices and special staff divisions at Headquarters shall ensure compliance with the provisions of this instruction.
3. DIRECTIVES AFFECTED. Asbestos Exposure Control Manual, COMDTINST M6260.16, is canceled.
4. DISCUSSION.
  - a. Overexposure to asbestos fibers has been shown to cause lung cancer as well as other debilitating lung diseases. Coast Guard personnel may encounter asbestos in numerous products and applications.
  - b. Control of asbestos exposure involves these basic elements:
    - (1) Identify asbestos sources and/or asbestos-containing materials;
    - (2) Manage in place or abate workplace asbestos hazards including proper disposal of asbestos-containing material following removal;
    - (3) Whenever necessary, employ safe work practices and personal protective equipment to minimize asbestos exposure; and
    - (4) Administratively, management of asbestos-containing material in the workplace includes planning, periodic site review, contract and contractor management, and record keeping.
  - c. This manual establishes asbestos control requirements for commands and provides basic guidance for Coast Guard support personnel in mitigating asbestos hazards.
  - d. Major changes to COMDTINST M6260.16 are summarized below:
    - (1) Reflects changes to the Coast Guard organization as a result of the creation of the Office of Health and Safety (Commandant (G-K)) and the Maintenance and Logistics Commands (MLCs).
    - (2) Updates asbestos exposure control practices to reflect changes in Federal and consensus safety and health standards.

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5. REQUIREMENTS.

- a. Occupational Exposure Level. Unprotected personnel shall not be exposed to airborne asbestos fiber concentrations greater than 0.1 fibers per cubic centimeter (0.1 f/cc) averaged over an eight-hour day. Airborne sampling conducted on vessels and at shore units has shown that if asbestos is maintained in a state of good repair, during normal operations, not involving asbestos removal or repair, airborne asbestos concentrations do not exceed the stated exposure level.
- b. Non-occupational Exposure Level. In areas specifically designated for berthing, lodging, or housing, personnel shall not be exposed to airborne asbestos fiber concentrations greater than 0.01 fibers per cubic centimeter (0.01 f/cc) in accordance with the guidance in reference (f).
- c. The fabrication, installation, or use of new asbestos-containing material is prohibited, except where there is no satisfactory substitute. Where technical manuals, instructions, drawings or parts lists call out materials or parts containing asbestos, the manufacturer shall be contacted to determine if there are technically suitable alternative parts or materials. The use of asbestos products for which acceptable substitutes do not exist shall have prior approval of Commandant (G-KSE).
- d. For shore commands, commanding officers and group commanders shall:
  - (1) Prohibit the removal, repair, or disposal of asbestos containing material (ACM) by Coast Guard military and civilian personnel unless authorized by MLC (k). Commanding Officer, USCG Base Ketchikan and Commanding Officer, USCG Yard may authorize personnel to remove, repair, and dispose of asbestos in accordance with Federal and State regulations. The cognizant MLC (k) shall conduct administrative and on-site review of the asbestos operations at the Coast Guard Yard and Base Ketchikan. See Chapter 4 of this manual for further guidance.
  - (2) Notify the cognizant MLC (k) to conduct identification testing when a potential asbestos hazard to personnel is suspected. Identification testing may also be done by the command with guidance from MLC (k). See Chapter 3 of this manual for further guidance. When ACM is identified in Coast Guard-owned buildings or equipment at the unit, MLC (k) will determine if the ACM identified will either be maintained or removed. Commanding Officer, USCG Base Ketchikan and Commanding Officer, USCG Yard may authorize personnel to make these determinations for ACM removal or maintenance.

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- (3) Implement an Asbestos Management Plan in accordance with Chapter 2 of this manual if ACM is identified at the command.
  - (4) For identified ACM which is to be removed, notify the cognizant MLC (v) or MLC (s) who shall coordinate the services necessary for removal and disposal. The command shall retain a copy of the ACM hazardous waste records provided by MLC (v) or MLC (s) as required by reference (j) for ACM removed at their command.
  - (5) With the assistance of MLC (k), ensure an asbestos hazard awareness briefing is provided to individuals in Coast Guard-owned housing units undergoing major asbestos abatement work and to the Coast Guard employees responsible for the maintenance of the units undergoing asbestos abatement work.
- e. For cutters, commanding officers shall:
- (1) Notify MLC (k) to conduct identification testing when a potential asbestos hazard to personnel is suspected. See Chapter 3 of this manual for further guidance.
  - (2) Coordinate with MLC to develop and implement an asbestos management plan for the command in accordance with the guidance in Chapter 2 if ACM is identified on the vessel.
  - (3) Prohibit removal or rip-out of asbestos insulation and other asbestos containing materials by ship's force personnel, except during underway casualty repair work which has the approval of the vessel's commanding officer or personnel delegated this authority by the commanding officer such as Damage Control Central. Training in emergency shipboard asbestos removal is available from the U.S. Navy. See Chapter 4 for further guidance.
  - (4) For cutters within the chain of command of a group, the Group Commander shall be responsible for the implementation and administration of the Asbestos Exposure Control Program.
- f. Commander, Maintenance and Logistics Command (MLC) shall:
- (1) Identify ACM and sources of asbestos exposure at units. Identification of ACM shall be conducted during routine MLC (k) Safety and Environmental Health audits, assistance visits, or inspections.

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- (2) For ACM identified, determine the appropriate ACM abatement response actions including determining whether the ACM should be managed in place or removed.
  - (3) For cutters on which ACM has been identified, provide support in the development and implementation of an ACM management plan as described in Chapter 2 of this manual.
  - (4) For shore commands at which ACM has been identified, provide assistance with the implementation of an ACM management plan as described in Chapter 2 of this manual.
  - (5) Ensure that the cognizant Civil Engineering Unit (CEU) or Naval Engineering Support Unit (NESU) contracts and/or coordinates for the appropriate ACM abatement response actions as determined by MLC (k). The cognizant CEU or NESU shall ensure that ACM abatement response actions fully comply with all applicable Federal, State, and local laws and regulations including all reporting and record keeping requirements in references (i) and (j).
  - (6) Assist units with the selection of personal protective equipment for asbestos exposure control.
  - (7) In accordance with reference (k), coordinate for the services necessary to complete an asbestos survey on cutters designated for decommissioning.
  - (8) In accordance with reference (l), coordinate for the services necessary to identify asbestos contamination in Coast Guard owned buildings prior to their disposal or demolition.
  - (9) Provide an asbestos hazard awareness briefing to individuals in Coast Guard-owned housing units undergoing major asbestos abatement work and to the Coast Guard employees responsible for the maintenance of these units prior to the execution of major asbestos abatement projects upon request.
  - (10) Provide other assistance to units as requested.
6. REQUIRED REPORTS. No external reporting requirements are required. The only new internal reporting requirement is as follows: Each commanding officer or, if applicable, group commander is required to maintain an inventory of ACM identified at their command or at units within their group.

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For asbestos abatement activities, there are numerous external reporting and record keeping requirements from the Environmental Protection Agency, state, and local authorities. These external reporting and record keeping requirements include:

- a. Prior to the removal, renovation, or demolition of ACM, reference (i) requires that either the EPA or, if applicable, the cognizant State agency be notified (see enclosure (4) for required information and reporting format). This notification will be made by the command or MLC office contracting or coordinating the ACM operation.
  - b. As the generator of the ACM waste, the Coast Guard command which contracted for the ACM operation is responsible for tracking the ACM waste and ensuring its disposal in an approved landfill. In accordance with reference (j), the EPA or, if applicable, the cognizant State agency shall be notified (see enclosure (4) for required information and reporting format). This notification will be made by the command or MLC office contracting or coordinating the ACM operation.
  - c. Records of the information described above shall be maintained by the contracting command as well by the command at which the ACM was removed. Any records pertaining to asbestos-containing materials shall continue to be held until further notice.
7. FORMS AVAILABILITY. Form CG-5583, Notification of Demolition and Renovation may be locally reproduced.



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#### Enclosures:

- (1) Generic Procedure for Collection of a Bulk Specimen for Asbestos Analysis
- (2) Asbestos Warning Labels and Signs: Specifications and Commercial Vendors
- (3) Inspection Checklist for Asbestos-Containing Material
- (4) Environmental Protection Agency (EPA) Notification, Reporting, Monitoring, and Record Keeping for ACM Repair, Removal, and Disposal Operations
- (5) Work Practices for Removing Asbestos Brake Shoes



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## CHAPTER 1. BACKGROUND AND DEFINITIONS

- A. Introduction. This chapter provides background information on asbestos and definitions of various terms associated with asbestos.
- B. Background.
1. The term "asbestos" refers to six naturally occurring fibrous minerals. The three asbestos minerals which are most commonly used in commercial applications are chrysotile, amosite, and crocidolite. When mined and processed, asbestos is typically separated into very thin fibers. Asbestos has been used in a variety of products including: thermal insulation for furnaces, boilers and piping; asbestos cement products; fireproofing; asbestos cloth; ceiling tiles; brake lining and various gasket materials.
  2. Asbestos is a confirmed human carcinogen. Overexposure to airborne asbestos fibers can significantly increase the risk of incurring three serious diseases: lung cancer, asbestosis, and mesothelioma. Asbestosis is a chronic lung disease that impairs breathing and increases the risk of serious illness or death from respiratory infections. Mesothelioma is a cancer of the tissue which surrounds the lungs. Onset of these serious illnesses may occur after a latency period of 10-20 years following initial overexposure to airborne asbestos fibers. The risk of developing one of these illnesses is directly related to the duration and extent of an individual's exposure to asbestos fibers. Most cases of severe health problems resulting from asbestos exposure have been experienced by workers in industries such as shipbuilding, mining, milling, and asbestos fabricating where repeated exposures to high concentrations of asbestos fibers can occur.
  3. Intact and undisturbed asbestos materials do not pose a health risk. The mere presence of asbestos in a building does not mean that the health of the occupants is endangered. When asbestos-containing material (ACM) is in good condition and is properly managed, the risk of asbestos-related disease is minimal. However, when ACM is damaged, cut, sanded, or deteriorates, it may release asbestos fibers into the air and become hazardous.

4. Asbestos is one of the most thoroughly regulated occupational and environmental pollutants today. Federal, State, and local agencies have all developed specific standards and requirements to control asbestos hazards. This instruction tasks commands with basic asbestos control actions such as: identify potential ACM; prohibit removal of ACM; if necessary, implement an ACM management program; and maintain required record keeping. Control procedures beyond these basic actions are tasked to various Coast Guard support elements.

C. Definitions.

1. Asbestos-Containing Material (ACM): Any material containing more than 1% asbestos as determined using the methods specified in 40 CFR part 763, Section 1, subpart F, Appendix A. The percentage of asbestos in a material can be determined only by laboratory analysis.
2. Asbestos-Containing Waste: This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with asbestos. As applied to demolition and renovation operations, this term also includes regulated ACM waste and materials contaminated with asbestos such as disposable equipment and clothing as defined in reference (i).
3. Asbestos Sampling--Bulk Specimen: Performed to determine the presence and percentage of asbestos in a material. A small piece (approximately a teaspoonful) is removed from the suspected material (e.g., pipe insulation) and is sent intact to a laboratory for analysis. The material should not be pulverized or ground down to powder prior to analysis. Enclosure (1) provides a generic procedure for collection of a bulk specimen. See Chapter 3 to determine when bulk sampling is required.
4. Friable Asbestos Material: Material which may be crumbled or reduced to powder by hand pressure. Friable ACM is more likely to release asbestos fibers and, therefore, will be more hazardous than ACM which is not friable.
5. High Efficiency Particulate Air (HEPA) Filter: A filtering system capable of trapping and retaining at least 99.97 percent of particles 0.3 microns in diameter or larger.

## CHAPTER 2. ASBESTOS MANAGEMENT PLAN

- A. **Introduction.** The purpose of a unit Asbestos Management Plan is to manage ACM at a command in a systematic, risk-prioritized manner. The overall philosophy of this policy is to, whenever possible, "manage ACM in place." For cutters, because of the unique characteristics of afloat commands, every effort should be made to properly remove asbestos-containing material in accordance with Federal and State regulations using trained personnel during the cutter's yard availabilities. The elements of an Asbestos Management Plan and its implementation are discussed below. Specific requirements for ACM identification are discussed in Chapter 3. Requirements for ACM repair, removal, and disposal as components of an Asbestos Management Plan are discussed in Chapter 4.
- B. **Requirements for Cutters.** If ACM has been identified onboard a cutter, the following asbestos management plan shall be implemented:
1. An inventory of ACM onboard the cutter shall be completed or coordinated for by MLC (k). A copy of the inventory shall be retained by the cutter, MLC (k), and MLC (v).
  2. Labeling of identified ACM onboard shall be completed in accordance with the requirements of 2.F. below. MLC (v) shall coordinate completion of the labeling. Based on guidance from MLC (v), the command has the option to complete this requirement using their own personnel.
  3. Inspection of ACM onboard in accordance with the requirements of 2.G. below shall be completed by the command as part of scheduled material inspections.
  4. For cutters within the chain of command of a group, the group commander shall be responsible for the implementation and administration of the Asbestos Exposure Control Program.
- C. **Elements of an Asbestos Management Plan.** If ACM has been identified at a shore command in accordance with the procedures in Chapter 3, commanding officers or group commanders shall implement an Asbestos Management Plan which includes the following elements:
1. Designate an Asbestos Control Coordinator for the command or, if applicable, for the group;
  2. Develop and maintain an inventory of ACM identified at the command or, if applicable, for units within the group;
  3. Label representative sections of ACM identified in the workplace;

4. Conduct or coordinate with MLC (k) for the inspection of ACM identified in the workplace; and
5. Ensure that ACM repair, removal, and disposal operations are in accordance with the procedures in Chapter 4 of this manual.

**D. Designation of a Unit or Group Asbestos Control Coordinator.**

If ACM is identified at a shore command, the command shall designate an Asbestos Control Coordinator who will coordinate implementation of the Asbestos Management Plan. For units in a group command, the group commander shall appoint an Asbestos Control Coordinator for the group.

**E. Inventory of ACM.**

1. An inventory of ACM in use at each unit allows personnel to systematically plan and execute operations, rather than "crisis managing" once ACM is discovered. In addition, an ACM inventory eliminates unnecessary costs associated with repeated analysis of the same material suspected to contain asbestos. The unit inventory or, if applicable, group inventory of ACM shall include the following:
  - a. Location and/or use of the ACM;
  - b. The date on which the material was tested for asbestos content and/or reference to the documentation which shows that the material is ACM; and
  - c. Approximate amount (in square feet or linear feet) of ACM at each location.
2. As an example, an inventory entry for pipe insulation would appear as follows: Location: Building 20, Basement, Pipe Lagging; Tested: 11/2/90 by MLC (k); Amount: 30 linear feet of ACM pipe lagging. Identify the location as specifically as possible, using measurements from identifiable structural elements wherever possible. There is not a standard Coast Guard form for the inventory. The inventory will be maintained at the unit, or, if applicable, at the group.

**F. Labeling of ACM.**

1. Clear and thorough identification of ACM to employees in the workplace is essential to ensure proper handling and to minimize employee exposure to asbestos fibers. For material which has been identified as ACM, representative sections of the ACM in the workplace which may contaminate the workplace if the ACM is cut, torn, damaged or deteriorates shall be labeled.

2. Labels must not be spaced more than fifteen feet apart on the identified ACM, with at least one label on the ACM in each compartment or room in which ACM could contaminate the space if torn, cut, or damaged. For structures on which a label cannot be affixed (e.g., steam pipe), a metal tag with an affixed label may be used. All ACM in storage must be labeled. Asbestos warning labels are available from the commercial vendors listed in enclosure (2).

G. Inspection of ACM.

1. To determine the condition of the ACM, an annual visual inspection of the labeled ACM shall be conducted. Inspection is required for that ACM which may contaminate the workplace if it is cut, torn, damaged, or deteriorates. This inspection may be conducted in conjunction with unit material inspections, unit Safety and Occupational Health inspections, or MLC (k) Safety and Occupational Health audits of the unit. Enclosure (3) contains information to be determined during the inspection.
2. An annual visual inspection of the ACM insulation provides significant information as to the potential for fiber release from the ACM. ACM becomes health hazardous to employees once asbestos fibers are generated from the material by mechanical action (such as grinding or cutting) or when asbestos fibers are released from the ACM due to damage or deterioration.



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## CHAPTER 3. IDENTIFICATION OF ASBESTOS

### A. Introduction.

1. Identification of asbestos in the workplace is the first step in controlling asbestos exposure. This chapter discusses how to identify asbestos. If ACM is identified at a unit, the command must institute an Asbestos Management Plan as discussed in Chapter 2.
2. Coast Guard personnel may encounter ACM in three categories: in a product which contains asbestos, in equipment or building structures which contain ACM, or in the execution of various Coast Guard operations in which personnel may encounter ACM in workplaces not owned or operated by the Coast Guard.

### B. Identification Procedure.

1. Commanding officers and group commanders are responsible for identifying potential or suspected asbestos hazards and contacting MLC (k) for support. MLC (k) is responsible for asbestos hazard evaluation including the collection and laboratory analysis of material for asbestos content. When assistance from MLC (k) is not feasible, commands may be authorized by MLC (k) to collect bulk asbestos samples in accordance with the procedures in enclosure (1).
2. ACM identification is not easy or straightforward since asbestos cannot be distinguished by odor or color and since it is typically mixed with other materials prior to its use. The presence and percentage of asbestos in a material can be determined only by laboratory analysis unless documentation is available to verify the contents of the material.
3. Safety and Occupational Health personnel at the Coast Guard Yard and personnel at Coast Guard Base Ketchikan are authorized to perform the analysis and identification of asbestos.

### C. Products Containing Asbestos.

1. The use of products which contain asbestos is prohibited except where a satisfactory substitute does not exist. The use of asbestos products for which a satisfactory substitute does not exist shall have prior approval of Commandant (G-KSE).

2. Personnel can determine if a product contains ACM by reviewing the Material Safety Data Sheet (MSDS) for the product. In accordance with COMDTINST 6260.21(series), Hazard Communication for Workplace Materials, each unit shall obtain an MSDS for each hazardous material in use at the unit. Specific procedures and safe work practices for handling these products will be provided on the MSDS for the item.

D. Equipment and/or Structures Containing Asbestos.

1. Asbestos has excellent properties for thermal and electrical insulation. As a result, it has been used extensively in a variety of construction materials. ACM may be found in equipment, buildings, and/or cutters in which it may serve many purposes such as:
  - a. Surfacing material: ACM sprayed or troweled onto surfaces to provide fireproofing or sound dampening;
  - b. Thermal insulation: ACM applied as insulation in the form of pipe lagging, pipe wrap, batt, and cements for pipes, boilers, and tanks to reduce heat transfer; and
  - c. Miscellaneous insulating materials: this includes floor tiles, ceiling tile, or outdoor siding and roofing which contain asbestos.
2. Insulation material which meets the description in 3.D.1 or other material suspected of containing asbestos shall be tested prior to removal or repair. If laboratory analysis shows that the material is ACM, MLC (k) shall determine the appropriate removal or repair procedures. If the material is not tested, it must be assumed to be ACM and the removal or repair procedures required for ACM shall be used. There are two exceptions to this policy: underway casualty repair work onboard cutters shall follow the procedures in Chapter 4; and material which has documentation to verify that it does not contain asbestos.
3. Prior to the decommissioning of a cutter, in accordance with reference (k), an asbestos survey onboard the cutter shall be completed.

4. Prior to the disposal or demolition of a Coast Guard owned building, an asbestos survey for the property shall be completed in accordance with reference (l). As per reference (j), asbestos does not necessarily have to be removed from a building or structure prior to its demolition. ACM must be kept wetted and in a non-friable condition throughout the demolition process so as to not generate visible emissions. Following demolition, the ACM waste must be kept wet throughout all stages of handling, storage, transport, and disposal at an approved landfill in accordance with reference (j).
  5. Insulation material which shows clear and obvious signs of deterioration such as crumbling outer layer, loose or falling lagging, or separation of insulating layers shall be tested for asbestos content by MLC (k). When assistance from MLC (k) is not feasible due to time constraints, commands may, with guidance from MLC (k), collect bulk asbestos samples in accordance with the procedures in enclosure (1). If documentation is available which shows that the material does not contain asbestos, identification testing is not required. If laboratory analysis shows that the insulation material contains ACM, MLC (k) shall determine appropriate repair or removal procedures.
- E. Non-Coast Guard Owned or Operated Facilities. Coast Guard personnel may encounter ACM in the execution of various operations in workplaces not owned or operated by the Coast Guard. Examples include: marine safety personnel conducting inspections in commercial shipyards or cutter crewmembers working in a commercial shipyard during the renovation of their cutter. Since the Coast Guard neither owns or operates these facilities, using the identification procedures described above will not be feasible. Personnel can minimize asbestos exposure by avoiding shipyard operations involving removal or repair of insulation material. For merchant vessels inspected by marine safety personnel, Navigation and Vessel Inspection Circular (NVIC) Number 6-87 provides procedures for the control of asbestos hazards onboard merchant vessels.



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## **CHAPTER 4. REPAIR, REMOVAL, AND DISPOSAL OF ASBESTOS-CONTAINING MATERIAL**

- A. Introduction. This chapter provides basic guidance to unit personnel on the repair, removal, and disposal of ACM.
- B. MLC (k) Authorization for Repair, Removal, and Disposal Operations.
1. Coast Guard military and civilian personnel are prohibited from removing, repairing, or disposing ACM unless authorized by MLC (k).
  2. Commanding Officer, U. S. Coast Guard Base Ketchikan and Commanding Officer, U. S. Coast Guard Yard are authorized to designate personnel to remove, repair, and dispose of ACM in accordance with Federal and State regulations. Each of these two commands shall provide the cognizant MLC (k) with documentation of the following annually: Applicable training; state and local certifications; work practices; respiratory protection program in accordance with reference (d); and other personal protective equipment use. The cognizant MLC (k) shall annually review the documentation described above and witness the work practices for at least one asbestos removal job.
  3. For cutters underway, removal of ACM is only authorized under the conditions described in 4.D, below. For non-emergency conditions when the cutter is dockside, the cognizant MLC (v) shall contract or coordinate for the services necessary to remove or repair the ACM.
  4. Prior to the commencement of major asbestos abatement projects in Coast Guard owned housing units, the command, with the assistance of MLC (k), shall ensure that an asbestos hazard awareness briefing is presented to Coast Guard members and their dependents residing in the housing units and to the Coast Guard personnel assigned to maintain the housing units. As a minimum, the briefing shall provide information on the hazards of asbestos and the hazard control methods to be used during the abatement project.
- C. Reporting and Record Keeping for Repair, Removal, and Disposal of ACM.
1. Prior to the repair, removal, and disposal of ACM, references (i) and (j) require that the Environmental Protection Agency or, if applicable, the cognizant state agency be notified with information on the operation.

2. For ACM repair, removal, and disposal operations, the cognizant contracting official shall be responsible for the reporting requirements in references (i) and (j). Enclosure (4) provides guidance on meeting the requirements of references (i) and (j). Records shall be retained for each ACM repair, removal, and disposal operation by the contracting command as well as by the command where the ACM abatement operation occurred.
3. For ACM operations at Coast Guard Yard and Base Ketchikan, reporting and record keeping requirements in references (i) and (j) shall be completed by each command with copies of reports submitted to MLC (k) for review.

**D. Repair of ACM.**

1. Coast Guard military and civilian personnel are prohibited from repairing ACM. The cognizant Civil Engineering Unit or Naval Engineering Support Unit shall coordinate or contract for services to perform ACM repair work and shall comply with the requirements in references (b), (c), (d), (f), and (i) as well as applicable state and local requirements.
2. MLC (k) may authorize Coast Guard personnel to perform minor ACM repair such as patching small punctures in ACM pipe lagging. In many states, ACM repair may only be done by individuals licensed by the state. MLC (k) shall advise unit personnel as to the applicability of Federal, State, and local laws and regulations; safe work practices; training; personal protective equipment; and other equipment necessary to perform the ACM repair.

**E. Removal of ACM.**

1. Coast Guard military and civilian personnel are prohibited from removing ACM. The cognizant MLC (v) or MLC (s) office shall coordinate or contract for the services necessary to remove and dispose of ACM and shall ensure that contractors and/or other personnel used in the removal of ACM fully comply with the requirements in references (b), (c), (d), (f), (g), (h), (i), and (j) as well as all applicable state and local laws and requirements.
2. For cutters, removal or rip-out of asbestos insulation and other asbestos containing materials shall not be done by ship's force personnel, except during underway casualty repair work which has the approval of the vessel's commanding officer or personnel delegated this authority by the commanding officer such as Damage Control Central.

The following training course provides instruction in emergency shipboard asbestos removal:

Course Title: Shipboard Asbestos Emergency Response

Course Number: A-760-2166

Course Duration: 1 day

POC: U. S. Navy

Naval Safety School, 9080 Breezy Point Crescent

Norfolk, VA 23511-3998 Ph: (804) 445-8778 (Ext. 324)

The cognizant Naval Engineering Support Unit shall assist cutters in the disposal of ACM from underway casualty control work. Removal of asbestos clutch pads on medium endurance cutters is authorized under the following conditions: non-asbestos clutch pads shall be used to replace asbestos clutch pads; and dust hazards will be minimized during the replacement by using wet methods during removal and by avoiding dust generating activities (i.e., compressed air shall not be used to clean the clutch housing).

3. MLC (k) may authorize Coast Guard personnel to perform only minor ACM removal work. Reference (i) requires EPA notification and safe work practices for friable and certain non-friable ACM removal jobs. In many states, state certified training and licensure is required for anyone removing ACM. MLC (k) may authorize unit personnel to perform the following minor ACM removal jobs: removal of asbestos brake shoes in accordance with enclosure (5) and small-scale removal of non-friable ACM material as defined in reference (i). MLC (k) shall advise unit personnel as to the applicability of Federal, State, and local laws and regulations; work practices; personal protective equipment; training; and other equipment necessary to perform the removal and disposal of ACM. For removal of asbestos brake shoes, a command may substitute an alternate procedure to the one required in enclosure (5) based upon a hazard evaluation and written authorization from MLC (k).

**F. ACM Waste Shipment and Disposal.**

1. The ACM waste generated from repair and/or removal operations must be disposed of in accordance with the requirements in references (i) and (j).

2. For asbestos-containing waste generated on Coast Guard facilities and disposed of off-site, the command which contracted for or coordinated the ACM operation shall ensure that:
  - a. The disposal facility is being operated in accordance with reference (i); and
  - b. That the record keeping requirements of references (i) and (j) are completed. The contracting command and the command generating the ACM waste shall retain copies of the disposal record keeping information.
3. Disposal of asbestos-containing waste in a Coast Guard owned and operated disposal facility is not encouraged, however, for those disposal facilities in operation the command shall ensure that:
  - a. The generator's records required by references (i) and (j) are maintained; and
  - b. That the owner/operator records required by references (h) and (j) are maintained.

G. Emergency Response for ACM Release.

1. Emergency response to an ACM release not generated from repair, removal, or disposal operations shall be in accordance with guidance from MLC (k).
2. After an ACM release, it is critical that ACM not be "carried" into other spaces by pedestrian traffic or through the ventilation system. Prior to contacting MLC (k) for assistance, attempt to determine how much ACM has been released, how far it has spread in the area, and if the release may contaminate the ventilation system in the space. MLC (k) shall provide guidance on equipment and entry procedures.



**GENERIC PROCEDURE FOR COLLECTION OF A BULK SPECIMEN  
FOR ASBESTOS ANALYSIS**

- A. **Introduction.** A small amount of material (approximately a teaspoonful) is needed to test for asbestos content. The following information provides a generic procedure for collecting a bulk specimen for asbestos analysis.
- B. **Materials Required.**  
Wetting agent: spray bottle with water  
Cutting tool: a utility knife can be used for flat pieces such as floor tiles or gasket material. For insulation on a pipe or building structure, a small vial or piece of metal piping less than one-half inch in diameter can be used (do not use a styrofoam container). A cork borer can also be used.  
Respiratory Protection: half-face respirator with High Efficiency Particulate Air (HEPA) filters (see reference (d) for guidance on requirements for a respiratory protection program)  
Sealable plastic bags  
Latex paint or sealant
- C. **Procedure.**
1. Put on half-face respirator with HEPA filters.
  2. Thoroughly wet the surface of the material to be sampled with water mist from a spray bottle.
  3. For insulation on a pipe or structure, with a twisting motion, slowly push the sampling vial into the material. Be sure to penetrate any paint or protective coating and all layers of the material. Place the vial and material into a sealable plastic bag. Place another plastic bag around the bagged specimen (double-bag specimen).
  4. For flat pieces such as floor tiles or gasket material, slowly cut the wetted material and place it in a sealable plastic bag. Place another plastic bag around the bagged specimen (double-bag specimen).
  5. Label the outer plastic bag with:
    - a. Date
    - b. Location of the sampled material (e.g., unit, building, room)
    - c. Sample number or code
    - d. Name of person who took the sample
    - e. Brief description of the sampled material (e.g., floor tile, pipe lagging, etc.)

6. Clean debris, if any, with wet towels and discard them in a plastic bag.
7. Use latex paint or a sealant to cover the spot where the sample was taken.
8. If submitting the sample to MLC (k) for analysis, a cover letter must accompany each request. The cover letter must refer to the sample numbers or codes, include material description of each sample, the type of analysis required (i.e., asbestos bulk sample analysis), the name of the person who collected the sample, and a point of contact for the sample results.

**ASBESTOS WARNING LABELS AND SIGNS: SPECIFICATIONS  
AND COMMERCIAL VENDORS**

**A. Introduction.**

Warning labels affixed to ACM should contain the following information or equivalent information:

DANGER  
CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD

Warning signs which are posted outside of asbestos abatement work areas should contain the following information or equivalent information:

DANGER  
ASBESTOS  
CANCER AND LUNG DISEASE HAZARD  
AUTHORIZED PERSONNEL ONLY  
RESPIRATORS AND PROTECTIVE CLOTHING  
ARE REQUIRED IN THIS AREA

**B. Sources.**

Warning labels and signs are available from numerous commercial sources including the following:

Alphabet Signs  
2427 Kirkwood Highway  
Wilmington, DE 19805  
800-582-6366

Lab Safety Supply  
40 S. Wright Rd.  
Janesville, WI 53547  
800-356-0783

American Health & Safety Co.  
6250 Nesbitt Road  
Madison, WI 53719  
800-522-7554

Labelmaster  
American Labelmark Co.  
5724 Pulaski Road  
Chicago, IL 60646  
800-621-5808

W. H. Brady Co.  
727 W. Glendale Avenue  
P. O. Box 571  
Milwaukee, WI 53201  
800-635-7557

Safety Equipment Company  
6507 North Harney Road  
Tampa, FL 33610  
800-226-6658

Carlton Industries Inc  
Hwy 71 West  
P.O. Box 280  
La Grange, TX 78945  
800-231-5988

Safety Sign Co.  
13700 Prospect Rd.  
P. O. Box 360500  
Cleveland, OH 44136  
800-992-1177

HCL Labels Inc  
740 South Bernardo Ave  
Sunnyvale, CA 94087  
800-421-6710

Tags & Labels Unlimited  
1516 River Oaks Rd.  
W. Harahan, LA 70123  
800-274-0028

NOTE: For affixing a label on pipe lagging or coated insulation, it may be necessary to apply adhesive on the insulation prior to affixing the label. If necessary, the label can be affixed to a paper or metal tag which can then be attached to the insulation.



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**INSPECTION CHECKLIST FOR ASBESTOS-CONTAINING MATERIAL**

A. The information shown below is required to be collected during the annual inspection of ACM at a command. The form shown below is not a standard form. Information may be collected on the form shown below or an equivalent format.

|   |     |    |
|---|-----|----|
| Inspection Date:  |     |    |
| Building / Room Number:   |     |    |
| ACM Type:<br><input type="checkbox"/> Pipe Lagging <input type="checkbox"/> Ceiling panels      Other _____<br><input type="checkbox"/> Boiler Insulation <input type="checkbox"/> Floor tiles<br><input type="checkbox"/> Wall panels <input type="checkbox"/> Sprayed on insulation |     |    |
| ACM Condition:  | Yes | No |
| 1. Is the ACM labeled?.....<br>(If no, apply label)   |     |    |
| 2. Is the ACM damaged?.....<br>If so, check all that apply:   |     |    |
| a. Punctures, gouges, or tears?.....<br>(If YES, see Note A below)  |     |    |
| b. Cracking or peeling?.....<br>(If YES, see Note A below)  |     |    |
| c. Water damage?.....<br>(If YES, see Note B below)   |     |    |
| d. Delayering or delaminating?.....<br>(If YES, see Note C below)   |     |    |
| 3. Does any ACM debris or dust appear<br>around the ACM?.....<br>(If YES, see Note D below)   |     |    |
| 4. For pipe lagging and boiler ACM,<br>does the coated surface "give" under<br>hand pressure?.....<br>(If YES, see Note C below)  |     |    |

NOTE A: If the ACM is damaged as described, schedule the ACM for repair. If gouges, punctures, or tears are found in the ACM, determine if workplace practices are damaging the ACM.

NOTE B: Water damage may indicate underlying pipe damage. Determine if maintenance is required.

NOTE C: If ACM damage is extensive, contact MLC (k) to determine if ACM removal is necessary.

NOTE D: If debris or dust in the area appears to be from the ACM, collect a sample in accordance with enclosure (1) and submit to MLC (k) for analysis.



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**ENVIRONMENTAL PROTECTION AGENCY (EPA) NOTIFICATION, REPORTING,  
MONITORING, AND RECORD KEEPING FOR ACM REPAIR, REMOVAL, AND  
DISPOSAL OPERATIONS**

- A. **Introduction.** Prior to the execution of an ACM repair or removal operation, the Environmental Protection Agency (EPA) or the cognizant state agency must be notified in accordance with reference (i). In addition, reference (j) contains reporting and record keeping requirements for ACM disposal operations.
- B. **Notification.** The following information is required to be reported to EPA or the cognizant state agency prior to commencement of ACM repair, removal, or demolition operations. The form shown in enclosure (4-A) may be used or the information may be forwarded in an equivalent format. Information to be forwarded includes:
1. Name and address of owner and operator
  2. Type of operation (repair, removal, demolition)
  3. Amount of asbestos
  4. Work location and description
  5. Start date and anticipated completion date of operation
  6. Work practices to be used
  7. Method of compliance (e.g., wetting)
  8. Method of storage until transported
  9. Method of transport and name of transporter
  10. Name and address of disposal site
  11. Amount of ACM waste to be disposed of
- C. **ACM Waste Shipment and Disposal.** Following ACM removal, waste generated from those operations is a hazardous waste which must be handled in accordance with the requirements in reference (j). As the generator of the ACM waste, the Coast Guard command which contracted for or coordinated the ACM operation is responsible for tracking the ACM waste and ensuring its disposal in an approved landfill. In accordance with reference (j), the following information must be reported for ACM waste shipment and disposal:
1. Number of containers of waste
  2. Total quantity of waste
  3. Number of containers of waste
  4. Total quantity of waste
  5. Name and address of transporter
  6. Name and address of disposal site
  7. Friability of ACM waste
  8. Special transportation, treatment, storage, or disposal information

This information may be reported on the form shown in enclosure (4-B) or in an equivalent format. In addition, **request a signed copy of the shipping manifest from the disposal site.** This may serve as a receipt denoting that the ACM was received at the site.

- D. **Record Keeping.** Records of the information described above shall be maintained by the contracting command as well by the command at which the ACM was removed.



## NOTIFICATION OF DEMOLITION AND RENOVATION

|   |                    |  |                |                                    |
|---|--------------------|--|----------------|------------------------------------|
| Operator Project #  | Postmark           | Date Received                                  | Notification # |                                    |
| I. TYPE OF NOTIFICATION ( O-Original R-Revised C-Cancelled ):   |                    |  |                |                                    |
| II. FACILITY INFORMATION ( Identify owner, removal contractor, and other operator )                           |                    |  |                |                                    |
| OWNER NAME:   |                    |  |                |                                    |
| Address:  |                    |  |                |                                    |
| City:   | State:             | Zip:   |                |                                    |
| Contact:  | Tel:               |  |                |                                    |
| REMOVAL CONTRACTOR:   |                    |  |                |                                    |
| Address:  |                    |  |                |                                    |
| City:   | State:             | Zip:   |                |                                    |
| Contact:  | Tel:               |  |                |                                    |
| OTHER OPERATOR:   |                    |  |                |                                    |
| Address:  |                    |  |                |                                    |
| City:   | State:             | Zip:   |                |                                    |
| Contact:  | Tel:               |  |                |                                    |
| III. TYPE OF OPERATION ( D-Demo O-Ordered Demo R-Renovation E-Emer.Renovation ):                              |                    |  |                |                                    |
| IV. IS ASBESTOS PRESENT? ( Yes/No )   |                    |  |                |                                    |
| V. FACILITY DESCRIPTION ( Include building name, number and floor or room number )                            |                    |  |                |                                    |
| Bldg Name:  |                    |  |                |                                    |
| Address:  |                    |  |                |                                    |
| City:   | State:             | County:  |                |                                    |
| Site Location:  |                    |  |                |                                    |
| Building Size:  | # of Floors:       | Age in Years:                                  |                |                                    |
| Present Use:  |                    | Prior Use:                                     |                |                                    |
| VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL: |                    |  |                |                                    |
| VII. APPROXIMATE AMOUNT OF ASBESTOS, INCLUDING:   | RACM To Be Removed | Nonfriable Asbestos Material Not To Be Removed |                | Indicate Unit of Measurement Below |
| 1. Regulated ACM to be removed<br>2. Category I ACM Not Removed<br>3. Category II ACM Not Removed             |                    | Cat I  | Cat II         | UNIT                               |
| Pipes   |                    |  |                | Ln Ft: Ln m:                       |
| Surface Area  |                    |  |                | Sq Ft: Sq m:                       |
| Vol RACM Off Facility Component   |                    |  |                | Cu Ft: Cu m:                       |
| VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start:  |                    |  |                | Complete:                          |
| IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start:   |                    |  |                | Complete:                          |

DEPARTMENT OF TRANSP., USCG, CG-5583 (4/94)

LOCAL REPRO

## NOTIFICATION OF DEMOLITION AND RENOVATION (continued)

|  |        |                                   |
|--|--------|-----------------------------------|
| <b>X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:</b>  |        |                                   |
| <b>XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:</b>   |        |                                   |
| <b>XII. WASTE TRANSPORTER #1</b>   |        |                                   |
| Name:  |        |                                   |
| Address:   |        |                                   |
| City:  | State: | Zip:                              |
| Contact Person:  |        | Telephone:                        |
| <b>WASTE TRANSPORTER #2</b>  |        |                                   |
| Name:  |        |                                   |
| Address:   |        |                                   |
| City:  | State: | Zip:                              |
| Contact Person:  |        | Telephone:                        |
| <b>XIII. WASTE DISPOSAL SITE</b>   |        |                                   |
| Name:  |        |                                   |
| Location:  |        |                                   |
| City:  | State: | Zip:                              |
| Telephone:   |        |                                   |
| <b>XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW:</b>  |        |                                   |
| Name:  |        | Title:                            |
| Authority:   |        |                                   |
| Date of Order (MM/DD/YY):  |        | Date Ordered to Begin (MM/DD/YY): |
| <b>XV. FOR EMERGENCY RENOVATIONS</b>   |        |                                   |
| Date and Hour of Emergency (MM/DD/YY):   |        |                                   |
| Description of the Sudden, Unexpected Event:   |        |                                   |
| Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:   |        |                                   |
| <b>XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLD, PULVERIZED, OR REDUCED TO POWDER.</b>  |        |                                   |
| <b>XVI. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS. (Required 1 year after promulgation)</b> |        |                                   |
| _____<br>(Signature of Owner/Operator)   |        | _____<br>(Date)                   |
| <b>XVII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.</b>  |        |                                   |
| _____<br>(Signature of Owner/Operator)   |        | _____<br>(Date)                   |

## ASBESTOS DEMOLITION/RENOVATION NOTIFICATION FORM

## GENERAL INFORMATION

The Asbestos NESHAP, 40 CFR Part 61, Subpart M, requires written notification of demolition or renovation operations under Section 61.145. This form may be used to fulfill this requirement. Only complete notification forms are acceptable. Incomplete notification may result in enforcement action.

The notification should be typewritten and postmarked or delivered no later than ten days prior to the beginning of the asbestos removal activity (dates specified in Section VIII) or demolition (dates specified in Section IX). Please submit this form to:

## INSTRUCTIONS

- I. Type of Notification: Enter "O" if the notification is a first time or original notification, "R" if the notification is a revision of a prior notification, or "C" if the activity has been cancelled.
- II. Facility Information: Enter the names, addresses, contact persons and telephone numbers of the following:  
 Owner: Legal owner of the site at which asbestos is being removed or demolition planned.  
 Removal Contractor: Contractor hired to remove asbestos.  
 Other Operator: Demolition contractor, general contractor, or any other person who leases, operates, controls or supervises the site.  
 If known, the name of the site supervisor should be entered as the contact person for the notification. If additional parties share responsibility for the site, demolition activity, renovations or ACM removal, include complete information (including name, address, contact person and telephone number) on additional sheets submitted with the form.
- III. Type of Operation: Enter "D" for facility demolition, "R" for facility renovation, "O" for ordered demolitions, or "E" for emergency renovations.
- IV. Is Asbestos Present? Answer "Yes" or "No" regardless of the amount or type of asbestos.
- V. Facility Description: Provide detailed information on the areas being renovated or demolished. If applicable, provide the floor numbers and room numbers where renovations are to be conducted.  
 Site Location: Provide information needed to locate site in the event that the address alone is inadequate.  
 Building Size: Provide in square meters or square feet.  
 No. of Floors: Enter the number of floors including basement or ground level floors.  
 Age in Years: Enter approximate age of the facility.  
 Present Use/Prior Use: Describe the primary use of the facility or enter the following codes: H – Hospital; S – School; P – Public Building; O – Office; I – Industrial; U – University or College; B – Ship; C – Commercial; or R – Residence.
- VI. Asbestos Detection Procedure: Describe methods and procedures used to determine whether ACM is present at the site, including a description of the analytical methods employed.
- VII. Approximate Amount of Asbestos Including: (1) Regulated ACM to be removed (including nonfriable ACM to be sanded, ground or abraded); (2) Category I ACM not removed; and (3) Category II ACM not removed.

For both removals and demolitions, enter the amount of RACM to be removed by entering a number in the appropriate box and an "X" for the unit. For demolitions only, enter the amount of Category I and II nonfriable asbestos not to be removed in the appropriate boxes.

Category I nonfriable material includes packing, gaskets, resilient floor covering and asphalt roofing materials containing more than one percent asbestos. Category II nonfriable material includes any material, excluding Category I products, containing more than one percent asbestos, that when dry, cannot be crumbled, pulverized or reduced to powder.

- VII. Scheduled Dates of Asbestos Removal (MM/DD/YY): Enter scheduled dates (month/day/year) for asbestos removal work. Asbestos removal work includes any activity, including site preparation, which may break up, dislodge or disturb asbestos material.
- IX. Scheduled Dates of Demo/Renovation (MM/DD/YY): Enter scheduled dates (month/day/year) for beginning and ending the planned demolition or renovation.
- X. Description of Planned Demolition or Renovation Work, and Method(s) to be Used: Include in this description the demolition and renovation techniques to be used and a description of the areas and types of facility components which will be affected by this work.
- XI. Description of Engineering Controls and Work Practices to be Used to Control Emissions of Asbestos at the Demolition and Renovation Site: Describe the work practices and engineering controls selected to ensure compliance with the requirements of the regulations, including both asbestos removal and waste-handling emission control procedures.
- XII. Waste Transporter(s): Enter the names, addresses, contact persons and telephone numbers of the persons or companies responsible for transporting ACM from the removal site to the waste disposal site. If the removal contractor or owner is the waste transporter, state "same as owner" or "same as removal contractor." If additional parties are responsible include complete information on an additional sheet submitted with the form.
- XIII. Waste Disposal Site: Identify the waste disposal site, including the complete name, location and telephone number of the facility. If ACM is to be disposed of at more than one site, provide complete information on an additional sheet submitted with the form.
- XIV. If Demolition Ordered by a Government Agency, Please Identify the Agency below: Provide the name of the responsible official, title and agency, authority under which the order was issued, the dates of the order and the dates of the ordered demolition.
- XV. Emergency Renovation Information: Provide the date and time of the emergency, a description of the event and a description of unsafe conditions, equipment damage or financial burden resulting from the event. The information should be detailed enough to evaluate whether a renovation falls within the emergency exception.
- XVI. Description of Procedures to be Followed in the Event that Unexpected Asbestos is Found or Previously Nonfriable Asbestos Material Becomes Crumbled, Pulverized or Reduced to Powder: Provide adequate information to demonstrate that appropriate actions have been considered and can be implemented to control asbestos emissions adequately, including at a minimum, conformance with applicable work practice standards.
- XVII. Certification of Presence of Trained Supervisor: One year after promulgation of the applicable regulation, the notifier must certify that a person trained in asbestos-removal procedures will supervise the demolition or renovation. The supervisor is responsible for the activity on-site. Evidence that the training has been completed by the supervisor must be available for inspection during normal business hours.
- XVIII. Verification: Please certify the accuracy and completeness of the information provided by signing and dating the notification form.

**WASTE SHIPMENT RECORD**

|  |  |                        |   |
|--|--|------------------------|---|
| 1. Work site name and mailing address  |  | Owner's name           | Owner's telephone no.                               |
| 2. Operator's name and address   |  |                        | Operator's telephone no.                            |
| 3. Waste disposal site (WDS) name, mailing address, and physical site location   |  |                        | WDS phone no.                                       |
| 4. Name, and address of responsible agency   |  |                        |   |
| 5. Description of materials  |  | 6. Containers No. Type | 7. Total quantity m <sup>3</sup> (yd <sup>3</sup> ) |
|  |  |                        |   |
| 8. Special handling instructions and additional information  |  |                        |   |
| 9. OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations. |  |                        |   |
| Printed/typed name & title   |  | Signature              | Month Day Year                                      |
| 10. Transporter 1 (Acknowledgment of receipt of materials)   |  |                        |   |
| Printed/typed name & title   |  | Signature              | Month Day Year                                      |
| Address and telephone no.  |  |                        |   |
| 11. Transporter 2 (Acknowledgment of receipt of materials)   |  |                        |   |
| Printed/typed name & title   |  | Signature              | Month Day Year                                      |
| Address and telephone no.  |  |                        |   |
| 12. Discrepancy indication space   |  |                        |   |
| 13. Waste disposal site<br>owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in item 12.  |  |                        |   |
| Printed/typed name & title   |  | Signature              | Month Day Year                                      |

### INSTRUCTIONS

#### Waste Generator Section (Items 1-9)

1. Enter the name of the facility at which asbestos waste is generated and the address where the facility is located. In the appropriate spaces, also enter the name of the owner of the facility and the owner's phone number.
2. If a demolition or renovation, enter the name and address of the company and authorized agent responsible for performing the asbestos removal. In the appropriate spaces, also enter the phone number of the operator.
3. Enter the name, address, and physical site location of the waste disposal site (WDS) that will be receiving the asbestos materials. In the appropriate spaces, also enter the phone number of the WDS. Enter "on-site" if the waste will be disposed of on the generator's property.
4. Provide the name and address of the local, State, or EPA Regional agency responsible for administering the asbestos NESHAP program.
5. Indicate the types of asbestos waste materials generated. If from a demolition or renovation, indicate the amount of asbestos that is
  - Friable ACM
  - Nonfriable ACM
6. Enter the number of containers used to transport the asbestos materials listed in item 4. Also enter one of the following container codes used in transporting each type of asbestos material (specify any other type of container used if not listed below):
  - DM - Metal drums, barrels
  - DP - Plastic drums, barrels
  - BA - 6 mil plastic bags or wrapping
7. Enter the quantities of each type of asbestos material removed in units of cubic meters (cubic yards).
8. Use this space to indicate special transportation, treatment, storage or disposal or Bill of Lading information. If an alternate waste disposal site is designated, note it here. Emergency response telephone numbers or similar information may be included here.
9. The authorized agent of the waste generator must read and then sign and date this certification. The date is the date of receipt by transporter.

NOTE: The waste generator must retain a copy of this form.

Transporter Section (Items 10 & 11)

10. & 11. Enter name, address, and telephone number of each transporter used, if applicable. Print or type the full name and title of person accepting responsibility and acknowledging receipt of materials as listed on this waste shipment record for transport. Enter date of receipt and signature.

NOTE: The transporter must retain a copy of this form.

Disposal Site Section (Items 12 & 13)

12. The authorized representative of the WDS must note in this space any discrepancy between waste described on this manifest and waste actually received as well as any improperly enclosed or contained waste. Any rejected materials should be listed and destination of those materials provided. A site that converts asbestos-containing waste material to nonasbestos material is considered a WDS.
13. The signature (by hand) of the authorized WDS agent indicates acceptance and agreement with statements on this manifest except as noted in item 12. The date is the date of signature and receipt of shipment.

NOTE: The WDS must retain a completed copy of this form. The WDS must also send a completed copy to the operator listed in item 2.



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**WORK PRACTICES FOR REMOVING ASBESTOS BRAKE SHOES**

A. Introduction. This appendix contains the safe work practices for removing asbestos brake shoes published in 29 CFR 1910.1001, Appendix F--Work Practices and Engineering Controls for Automotive Brake Repair Operations. Asbestos exposure in automotive brake and clutch repair operations occurs primarily during the replacement of clutch plates and brake pads, shoes, and linings. Asbestos fibers may become airborne when an automotive mechanic removes the asbestos-containing residue that has been deposited as brakes and clutches wear. Employee exposures to asbestos can occur during the cleaning of the brake drum or clutch housing.

B. Enclosed Cylinder/HEPA Vacuum System Method.

1. Materials required:

- a. An enclosed cylinder-vacuum system (described below)
- b. Spray bottle with water
- c. Respirator with High Efficiency Particulate Air (HEPA) Filter cartridges
- d. Plastic bag labelled for asbestos waste

The enclosed cylinder-vacuum system consists of three components:

- (1) A wheel-shaped cylinder designed to cover and enclose the wheel assembly;
  - (2) A compressed-air hose and nozzle that fits into a port in the cylinder; and
  - (3) A HEPA-filtered vacuum used to evacuate airborne dust generated within the cylinder by the compressed air.
2. To operate the system, the brake assembly is enclosed in a cylinder that has viewing ports to provide visibility and cotton sleeves through which the mechanic can handle the brake assembly parts. The cylinder effectively isolates asbestos dust in the drum from the mechanic's breathing zone. Brake assembly isolation cylinders are available in two sizes: 7-to-12-inch size range for automobiles and light trucks; and the 12-to-19-inch size range for large commercial vehicles. The cylinder is equipped with built-in compressed-air guns and a connection for a vacuum cleaner equipped with a High Efficiency Particulate Air (HEPA) filter.
3. When the cylinder is in place around the brake assembly and the HEPA vacuum is connected, compressed air is blown into the cylinder to loosen the residue from the brake assembly parts. The vacuum then pulls the loosened material from within the cylinder, capturing the airborne material on the HEPA filter. The HEPA vacuum system can be disconnected from the brake

assembly isolation cylinder when the cylinder is not being used. The HEPA vacuum can then be used for clutch facing work, grinding, or other routine cleaning. The HEPA vacuum cannot be used for any non-asbestos work. It must be labeled with asbestos warning signs and signs that it is to be used for asbestos only.

4. When the vacuum cleaner's filter is full, it must be replaced according to the manufacturer's instruction, and appropriate HEPA-filtered dual cartridge respirators shall be worn during the process. The filter of the vacuum cleaner is assumed to be contaminated with asbestos fibers and should be handled carefully, wetted with a fine mist of water, placed immediately in a labelled plastic bag, and disposed of properly.
5. Enclosed cylinder-HEPA vacuum systems are available from the following vendors:

- a. Clayton Associates  
Farmingdale, NJ 07727-0589  
800-248-8650

For civilian cars and military trucks:  
Model BCE-2000M (enclosure and HEPA vacuum)  
National Stock Number: 7910-01-292-0009  
GSA Contract #GS07F1889A, Cage Code OC1P4

For medium and heavy duty trucks:  
Model BCE-7000M (enclosure, HEPA vacuum, and internal drum dolly) or  
Model BCE-7000XM (enclosure and HEPA vacuum)  
National Stock Number: 7910-01-338-3327  
GSA Contract #GS07F1889A, Cage Code OC1P4

- b. Nilfisk of America, Inc.  
300 Technology Dr.  
Malvern, PA 19355  
800-645-3475

For civilian cars and military trucks:  
Asbesto-Clene System 600 (Light Duty)  
Special Item 375-102  
Model 01882600 (enclosure and HEPA vacuum)  
GSA Contract #GS07F4427A

For medium and heavy duty trucks:  
Asbesto-Clene System 600 (Heavy Duty)  
Special Item 375-102  
Model 01883600 (enclosure, HEPA vacuum, and adjustable high lift stand)  
GSA Contract #GS07F4427A

C. Prohibited Practices. The following practices are prohibited during the removal of asbestos brake shoes:

1. Use of compressed air to blow out the brake drums;
2. Use of a brush, without a wetting agent, to remove the asbestos-containing residue;
3. Use of a brush dipped in water or a solvent to remove the asbestos-containing residue;
4. Use of a solvent mixture applied with compressed air to remove the asbestos-containing residue.

